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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/036,333	SLYVA ET AL.	
	Examiner	Art Unit	
	Virgil Herring	2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 24 May 2007.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-5,7-19,21-24,47,49-53,55,59,64 and 66 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-5 7-19 21-24 47 49-53 55 59 64 66 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. ____ .
3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ . 5) Notice of Informal Patent Application
6) Other: ____ .

DETAILED ACTION

This action is responsive to the Request for Continued Examination filed 24 May 2007. Claims 6, 20, 30, 42, 48, 54, 58, and 61-63 were previously cancelled. Claims 25-29, 31-41, 43-46, 56, 57, 60, and 65 are cancelled by this amendment. Claims 1-5, 7-19, 21-24, 47, 49-53, 55, 59, 64, and 66 are currently pending.

Response to Arguments

Applicant's arguments, see pages 15-16, filed 24 May 2007, with respect to the rejection(s) of independent claim(s) 1, 19, 47, and 53 under 35 USC §102(b) as being anticipated by Wookey (US Patent #6,023,507), have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of a new interpretation (i.e. previously non-cited sections) of Wookey.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 7-19, 21-24, 47, 49-53, 55, 59, and 64 are rejected under 35 U.S.C. 103(a) as being anticipated by Wookey (US Patent #6,023,507).

With regards to claims 1 and 47, Wookey discloses a method, in a computer system, comprising:

receiving, from a data storage system, a request to establish communications with the data storage system; (column 4, lines 11-16)

establishing a first packet communications session from the computer system to a data communications device capable of communicating with the data storage system; (figure 1, connection between service center computer system 101 and modem 120, where the modem is the "data communications device");

establishing a second packet communications session from the data communications device to a service processor associated with the data storage system; (figure 1, connection between the modem 120 and monitored "master" system 103) and

performing packet communications between the computer system and the service processor associated with the data storage system using the first and second packet communications sessions. (inherent; the communications sessions are established under the pretense that they will be used for communications)

With regards to claims 19 and 53, Wookey discloses a method, in a processor in a data storage system, for establishing a packet communications session with a computer system, the method comprising the steps of:

 sending, to the computer system, a request to establish a communications session with the data storage system; (column 4, lines 11-16)

 receiving a request to initiate a packet communications session, the request to initiate a packet communications session including user authentication information; (figure 1; column 10, lines 50-52)

 providing data storage system address information to an initiator of the request; (inherent step; communications require information regarding how to communicate, i.e. an IP address or modem phone number)

 receiving computer system address information to allow a processor in the data storage system to perform packet communications with the computer system; (inherent, see above) and

 establishing packet communications session with the computer system based on the computer system address information. (see figures 1-4, showing various packet communications sessions)

With regards to claims 1, 19, 47, and 53, Wookey does not expressly disclose the limitation that the request to establish a communications session includes user authentication information needed to establish the communications session. However, columns 9 and 10 discuss the security features of the disclosure, which prevent the

service center from accessing the monitored systems for reasons unrelated to its primary purpose. Examples given include a secure dial-back modem, having only a single point of access to a subnet, or a login/password system. It would have been obvious to one skilled in the art at the time of the invention that the required authentication information of a login/password system would not necessarily be known by a remote administrator at the service center. Thus, the information would have to be sent at some point before the connection is established. Because the connection establishment is, in fact, the second step of the process as described, it would have been obvious at the time of the invention that any required authentication information would have to be communicated during the first step, in which the request is made.

With respect to claim 2, Wookey (507) discloses the method of claim 1 wherein the step of receiving a request to establish a communications session with a data storage system comprise the steps of:

- receiving user authentication for a user of the computer system;
- authenticating an identity of the user based on the user authentication information;
- receiving a data storage system identity indicating an identity of the data storage system to which the packet communications session is to be established.

In column 8, lines 42-45 Wookey (507) states that "It is possible to protect each monitor with a unique password so that only authorized administrative personnel can access a given monitor for modification." Wookey (507) discloses a system for remotely servicing multiple computer systems in which service personnel can receive information on which systems need service and then securely connect using established authentication techniques.

With respect to claims 3, Wookey (507) discloses the method of claim 2 wherein:

the request to establish a communications session with a data storage system includes the identity of the data storage system to which a communications session is to be established; and

wherein the identity specifies at least one of:

i) a phone number of a service processor modem associated with the data storage system; (Col. 9, Lines 40-45)

ii) a serial number of the data storage system; and (Col. 4, Lines 63-68)

iii) customer information related to a customer operating the data storage system. (Col. 4, Lines 63-68)

With respect to claims 4, Wookey (507) discloses the method of claim 2 wherein the step of receiving data storage system identity information comprises the steps of: receiving data storage system search criteria;

providing data storage system search criteria to a connection monitor computer system to produce a set of data storage system identities that meet the data storage system search criteria; and

receiving the set of data storage system identities that meet the data storage system search criteria; and

allowing the user to select at least one data storage system identity from the set of data storage system identities.

Wookey (507) discloses that at startup, administration software searches for all monitor software on the same subnet (Col. 13, Lines 13-20). Thus, the criterion of the search is simply "all computers connected to this computer." This criterion is received from the administrator program code when the process begins to execute. The administrator software then displays a list of the accessible computers available for servicing, so that the user can select one to connect with (Fig. 8).

With respect to claims 5, Wookey (507) discloses the method of claim 4 wherein:

the data storage system search criteria is received from at least one of:

- i) a user of the computer system;
- ii) a service ticket identifying a data storage system;

the data storage system search criteria includes at least a portion of the user authentication information; and

the set of data storage system identities that meet the data storage system search criteria includes identities of data storage systems to which a user identified by the portion of the user authentication information is allowed to establish a packet communications session.

Since the invention of Wookey (507) searches for all connected computers when the administrator software starts running, one can say that the user supplies the search criteria by selecting which computers are on the same subnet as the computer running the administrator program (Col. 13, Lines 13-20). It is implicit that a program to inform the user of errors in the connected computers will apprise the user of any errors discovered (in other words, presenting a service ticket to the user). Wookey (507) discloses, in lines 50-54 of column 10, that the diagnostic data of the connected computers is password protected so that nobody other than a qualified service center engineer can access the information. Thus, since the search criteria are determined by physical connections (hard-wired) to the service computer, and access to the service computer is restricted by an authentication control subsystem, it is possible to state that the user authentication is a part of the search criteria because the user authentication is a component of one of the computers in the network which defines the search criteria.

With respect to claims 7, Wookey (507) discloses the method of claim 1 wherein the step of obtaining connection information for the data communications device comprises the steps of:

providing, to a connection monitor computer system, a request for an address of a data communications device, the request including data communications device selection criteria allowing the connection monitor computer system to select and return an address of an available data communications device that is authorized to establish the second packet communications session to the data storage system; and (Col. 4, Lines 47-53)

receiving the address of the data communications device selected by the connection monitor computer system. (Col. 4, Lines 47-53)

Wookey (507) discloses one modem (data communications device) for each small network of customer computer systems. Column 9, lines 40-41 indicate that the computer at the service center stores customer modem connection information in its internal memory. In this situation, a request for the address of the data communications device would take the form of a command to read from the hard drive or RAM.

With respect to claims 8, Wookey (507) discloses the method of claim 7 wherein the request for an address of the data communications device includes at least one of:

- i) a portion of the user authentication information; (Col. 8, Lines 42-45)
- ii) customer information concerning a customer operating the data storage system; and (Col. 4, Lines 62-65)

iii) connection information associated with the data storage system; and (Col. 4, Lines 62-65)

wherein the connection monitor computer system compares the request for an address against user and customer data to determine what data storage systems a user providing the request is allowed to access. (Col. 8, Lines 42-45)

Wookey (507) explains in column 8 that "it is possible to protect each monitor with a unique password so that only authorized administrative personnel can access a given monitor for modification." Protection with a unique password implies the use of user authentication information. Additionally, connection information associated with the system to which the user is attempting to connect would be inherently required. It is known to those in the art that connection authorization will involve comparing user data with data associated with the remote system. In this case, that would mean comparing the administrator's user data with the customer's information to determine if the administrator is authorized to modify that customer's monitor.

With respect to claims 9, Wookey (507) discloses the method of claim 1 wherein:

the step of initiating the first packet communications session
establishes an internet protocol communications session between the
computer system and the data communications device; and (Col.4 , Lines
47-50)

wherein the step of providing, to the data communications device, first packet communications session authentication information passes user authentication information from the computer system to the data communications device to allow the data communications device to authorize the internet protocol communications session. (Col. 8, Lines 42-45)

In column 4, Wookey (507) discloses that the modems of the vendor's modem pool are configured to connect to modems of the customer's monitored systems, and that the connection is under the control of a network terminal server. Thus, he has a communications session between a computer system and a data communications device. Since another connection between the data communications device and the monitored system exists implicitly, the connection from the vendor computer system to the data communications device can be described as the first packet communications session. Similarly, the connection from the data communications device is the second packet communications session. In column 8, Wookey (507) discloses the protection of the monitored computer systems using a unique password. A password implies authentication of the user at some point in the connection setup process. Authenticating the user to the remote network's server (the data communications device) is a well-known step in internet protocol communications.

With respect to claims 10, Wookey (507) discloses the method of claim 9 wherein the step of providing, to the data communications device, first packet communications

session authentication information causes the data communications device to communicate with a user account computer system to verify if the user of the computer system identified in the user authentication information is authorized to cause the data communications device to establish the first and second packet communications sessions from the computer system, through the data communications device, to the data storage system. (Col. 8, Lines 42-45)

Because the data communications device is a router or modem, a list of valid users would have to be stored elsewhere, because routers and modems have very little internal memory, which is used only to store the device's firmware and a list of valid IP addresses, or conversely, a list of blocked IP addresses. Thus, a separate computer system, which contains a list of valid users and their passwords, must exist inherently, and the data communications device must be able to communicate with it.

With respect to claims 11 and 50, Wookey (507) discloses the method of claim 1 or 47 wherein the step of establishing a second packet communications session from the data communications device to the data storage system comprises the steps of:

providing, to the data communications device, second packet communications session connection information allowing the data communications device to initiate the second packet communications session from the data communications device to the data storage system;
(Col. 4, Lines 47-50)

receiving second packet communications session state information indicating a state of the second packet communication session between the data communications device and the data storage system.
(Col. 9, Lines 52-65)

In column 4, Wookey (507) discloses the connection of the vendor modem to a customer modem under the control of a network terminal server. This clearly shows a first packet communications session from the vendor modem to the server, and a second packet communications session from the server to the customer modem. In this case, the network terminal server is acting as a router (data communications device). Those skilled in the art will recognize that in order to establish the connection between the router and the customer computer the user wishes to access, the router must be provided session information indicating to which computer the connection should be made. Column 9 shows the login and verification process for the connection. It is inherent that if verification is being carried out, then all parties involved in the verification are aware of it. Thus, at some point the data communications device must have received second packet communications session state information, which it would pass on to the vendor computer.

With regards to claims 12, Wookey (507) discloses the method of claim 11 wherein:

the second packet communications session connection information includes data storage system connection information associated with the data storage system and user authentication information of the user of the computer system; and (Col. 9, Lines 52-55)

wherein the step of providing the second packet communications session connection information to the data communications device causes the data communications device to perform the steps of:

initiating the second packet communications session from the data communications device to the data storage system using the data storage system connection information; (Col. 9, Lines 52-55)

providing the user authentication information to a remote access server associated with the data storage system to allow the remote access server to authorize the establishment of the second packet communications session from the data communications device to the data storage system; (Col. 8, Lines 42-48)

receiving data storage system address information at the data communications device identifying an address of the data storage system to allow the data communications device to establish the second packet communications session; and (Col. 9, lines 52-55)

forwarding second packet communications session state information to the computer system from the data communications device to allow the computer system to perform packet communications between

the computer system and data storage system using the first and second packet communications sessions. (Col. 9, Lines 52-55)

It is inherent to the system that the second packet communications session, between a router and the customer computer, must contain connection information for the customer computer. If it did not, the router would not know to which computer the user wishes to connect. Additionally, the inclusion of the user authentication information would be inherent, because without that information the customer computer would not know if the person attempting to establish a connection is a valid administrator. The steps listed in the connection procedure are also inherent requirements. Initiating the second packet communications session is inherent because that was the whole purpose of the connection process. Providing the user authentication information to a remote access server associated with the data storage system is inherent because that is the reason for having the user authentication information. Were it not provided to a server tasked to verification of remote users, then the data storage system would have no way of knowing if the user information is valid. The data communications device must inherently receive data storage system address information so that it can be sure that the correct connection was made. Finally, forwarding the second packet communications session state information to the vendor's computer system is inherent because if the state information were not forwarded, the vendor's computer system would have no way of knowing if the connection to the data storage system was successful.

With respect to claims 13 and 51, Wookey (507) discloses the method of claim 12 or 50 wherein the data storage system address information is a pre-configured network address assigned to the service processor associated with the data storage system.

Though it is never named as such, Wookey (507) inherently discloses the data storage system address information. It is known to those in the art that any computer system on a network or the Internet will always have an IP address or a modem phone number, which is the address of the computer on the network.

With regards to claims 14, Wookey (507) discloses the method of claim 12 wherein:

the second packet communications session connection information includes data storage system connection information including a phone number of a service processor modem associated with the service processor associated with the data storage system; and (Col. 4, Lines 46-68)

wherein the step of initiating the second packet communications session from the data communications device to the data storage system causes the data communications device to instruct a modem to dial the phone number of a service processor modem in order to establish a dial up connection to the data storage system from the data communications device. (Col. 4, Lines 47-49)

Wookey (507) discloses a dialup connection between the vendor's computer system and a monitoring computer connected to one or more monitored systems. It is known to those in the art that in the process of communicating between the vendor's computer and the monitoring computer, packet communication sessions are established between the vendor computer, a router (data communications device) and the monitoring computer. If the vendor's modem is to dial the customer's modem, the phone number of the customer's modem is an inherent part of the information which must be transferred.

With respect to claims 15, Wookey (507) discloses the method of claim 12 wherein:

the second packet communications session state information includes the data storage system address information and includes data storage system connection bandwidth information; and

wherein the step of forwarding second packet communications session state information to the computer system from the data communications device causes the data communications device to perform the step of:

forwarding the second packet communications session state information to a network manager computer system which receives the second packet communications session state information and forwards routing information to the

computer system so that the computer system can perform packet communications with the data storage system. (Col. 4, Lines 49-52)

It is known to those in the art that communications session information is passed between two computers that are attempting to communicate with each other. This state information includes the address information for all involved computers, as well as connection speed information (bandwidth). If this information is not provided the computers will not have the knowledge necessary to communicate correctly. Wookey (507) discloses a connectivity server 304 that manages connections to the modem pool 301 inside the service center 101. One skilled in the art would recognize that a server that provides links to a modem pool would receive communications session information before finalizing the link between the vendor's computer and the service center modem pool.

With respect to claims 16 and 52, Wookey (507) discloses the method of claim 12 or 47 wherein the step performing packet communications between the computer system and the service processor associated with the data storage system comprises the steps of:

receiving the second packet communications session state information in response to the step of forwarding;

adjusting connection bandwidth associated with the first packet communications session to match connection bandwidth associated with the second packet communications session;

providing computer system address information to the data storage system so that the data storage system can establish a route to the computer system; and

using the first packet communications session between the computer system and the data communications device and the second packet communications session between the data communications device and the service processor associated with the data storage system to perform packet communications between the computer system and the service processor associated with the data storage system.

Though Wookey (507) does not go into great detail describing the connection process, he does disclose that the connection is secure and authenticated. From this knowledge, one skilled in the art would recognize that communications session state information would be available to all the communicating parties. This information typically includes such data items as the addresses of the computers and the connection bandwidth. It is inherent that the bandwidth must be adjusted to a uniform rate to prevent lost packets. If one computer is sending packets faster than the other computer is prepared to receive them, the information is simply lost. It is also inherent that since all the computers involved in the communications need to know the

addresses of the other computers, providing the computer system address information to the data storage system is a necessity. Finally, it is inherent that after all the time taken to set up a secure communications channel, that the channel would be used to perform packet communications between the computer system and the service processor associated with the data storage system.

With respect to claim 17, Wookey (507) discloses the method of claim 1 wherein the step of receiving a request to initiate a communications session with the data storage system further comprises the steps of:

receiving a service ticket from the data storage system; and (Col. 3, Lines 40-45)
analyzing the service ticket to determine an identity of the data storage system to which a packet communications session is to be established from the computer system. (Col. 3, Lines 62-67; Col. 4, Lines 1-3)

Wookey (507) discloses how the customer systems periodically perform a variety of diagnostic tests and transmit the results to the remote service center. Though he does not use the phrase "service ticket," the functionality is the same. It is well known to those in the computing art that data transmitted from one computer to another (such as a service ticket) will contain information regarding the origin of the data. Because Wookey (507) discloses a database of customer information, including the history of "diagnostic tests and patches that exist for a particular product" (Col. 4, Lines 66-67), the diagnostic information must be associated in the database to whatever customer

system generated the information. Thus, it is inherent that any diagnostic information transmitted to the service center can be analyzed to determine its origin. Since this information includes "error messages from log files, system crash data" etc. (Col. 3, Lines 63-64), the staff at the service center will know when to initiate communications to the customer system.

With respect to claim 18, Wookey (507) discloses the method of claim 1 wherein the steps of establishing a first packet communications session, establishing a second packet communications session, and performing packet communications are performed using secure and authenticated communications sessions. (Col. 10, Lines 55-60)

With respect to claims 21, Wookey (507) discloses the method of claim 19, further comprising the steps of:

in response to the step of authenticating an identity of the user, the processor establishes a packet communications session with a data communications device from which the request to initiate a packet communications session originates. (Col. 4, Lines 12-16)

Wookey (507) discloses that some embodiments of the invention can include the use of the Internet. Those skilled in the computer networking art will recognize that communications over the Internet will require that the data pass through at least one router (data communications device) between its source and its destination. It is

inherent that if the data is going through a router, at some point the source computer and destination computer will both have to establish packet communications sessions with the router.

With respect to claims 22, 51, and 55, Wookey (507) discloses the method of claim 21, 50, or 53 wherein the processor is a service processor in the data storage system and the data storage system address information is a pre-configured network address assigned to the service processor associated with the data storage system by a vendor of the data storage system. (Col. 3, Lines 56-59; Col. 4, Lines 12-16)

In column 3, Wookey (507) describes a master monitoring computer at each monitored site, and that this master computer collects the diagnostic information for each monitored computer on the network. This system can be seen in Wookey's figure 1. This is analogous to the service processor of the data storage system, which is depicted in applicant's figure 3 as a computer connected to the data storage system. In regards to the second limitation of the claims, those skilled in the computer arts would know that in Internet communications, every computer has a pre-configured network address assigned to it, known as its IP address.

With respect to claim 23, Wookey (507) discloses the method of claim 19 wherein:

the request to initiate a packet communications session is sent from a data communications device interconnected with the computer system; and (Col. 4, Lines 12-17)

wherein the step of providing data storage system address information provides a network address of the processor in the data storage system to the data communications device for receipt by the computer system to allow the computer system to perform packet communications to the data storage system. (Col. 4, Lines 12-17)

Wookey (507) discloses that, "for embodiments in which the internet is used to transmit diagnostic results, the monitored system initiates provision of the diagnostic results without any intervention of the service center." In other words, the monitored system initiates communications over the Internet to the service center. As previously discussed, communications over the Internet necessitate that the data crosses one or more routers between its source and its destination. Thus, when the monitored system is attempting to establish communications with the service center, it sends a request to a router, and the router forwards the request to the service center. Also as previously mentioned, communications between two computers inherently include the transmission of address information for each computer. In communications over the Internet, this would be the IP address (i.e. the network address) of each computer.

With respect to claim 24, Wookey (507) discloses the method of claim 19 the step of establishing a packet communications session with the computer system establishes route information within the data storage system based on the computer system address information to allow the processor to perform packet communications with the computer system. (Col. 4, Lines 12-17)

Though Wookey (507) does not go into great detail about the connection process, those skilled in the art will realize that communications over the Internet include packet routing information to ensure that no data is lost en route.

With regards to claim 59, Wookey (507) discloses the computer system of claim 18 wherein a security client is activated on said service processor to block out TCP data packets that have not been encrypted by a predetermined gateway server. (Col. 10, Lines 3-8; It is inherent that if data received at either end of the communications link is not encrypted with the proper dynamic key, that data will be ignored. As previously stated, communications between computers are widely known in the art to be packet-based.)

With regards to claims 64 and 66, Wookey (507) discloses the method, computer system, and computer program product of claims 1 and 47 wherein said data storage system comprises a plurality of data storage devices which collectively operate under the control of at least one software driven microprocessor to access data in accordance

with data access requests. (Figure 4, #427; also, this is the exact definition of a computer)

Conclusion

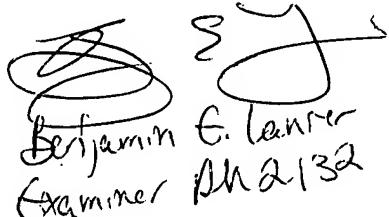
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virgil Herring whose telephone number is (571) 272-8189. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on (571) 272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Virgil Herring VH
Examiner
Art Unit 2132

VH



Benjamin E. Lerner
Examiner
Art Unit 2132